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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/988,433	11/20/2001	Alan D. Nisbet	71493-934 /pw	8583
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EXAMINER

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,433

Applicant(s)

NISBET ET AL.

Examiner

Gregory B. Sefcheck

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-14 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Applicant's Amendment filed 2/10/2006 is acknowledged.
- Claims 1-14 remain pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Oliva et al. (US006654802B1), hereafter Oliva.

- In regards to claims 1 and 6,

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements through utilization of software drivers (computer program product) implementing the physical layer of a SONET/SDH network (Title; Abstract; Col. 1, lines 40-50, 60-62; claim 1 – computer program for determining fiber connectivity along a line of a SONET network, line having at least two NEs).

Referring to Figs. 1 and 11, Oliva shows that each network element (NE) has one or more ports (circuit pack group) to which it may connect to other network elements (claim 1 – each NE having at least one circuit pack group).

Oliva discloses that the Section Trace in SONET overhead data may be enabled for transferring system-specific information between network elements (Col. 1, lines 48-50; Col. 2, lines 4-10; claim 1 – instructions for configuring each CPG to enable section tracing).

Oliva discloses that the Section Trace is configured to carry a unique network element and port identifiers from the first NE to the second NE (Col. 3, lines 12-15 and 47-49; claim 1 – instructions for populating section trace transmit value of each CPG with a unique section trace identifier value; claim 6 – instructions for receiving as input an identification of a first NE of the line).

Oliva discloses that the second NE stores the section trace information from the first NE in a register and determines a connection relationship as a function of this information (Col. 1, lines 49-54; claim 1 – instructions for reading a section trace received value of each CPG).

- In regards to Claim 8,

Oliva discloses a system and method for monitoring and determining connection topology among network elements covering all limitations of the parent claim.

Referring to Fig. 11, Oliva shows that the section trace values transmitted and received, identifying the ports of both the source and destination NEs, are stored in registers 72 (Col. 4, lines 43-49; claim 8 – instructions for storing the section trace transmit value of each CPG; claim 8 – instructions for storing the section trace received value of each CPG).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva in view of Shanton, III (US006278535B1), hereafter Shanton.

- In regards to Claim 2,

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements that covers all limitations of the parent claim.

Oliva shows that the Section Trace may be defined in 16 bytes (Col. 2, lines 4-8; Col. 9, lines 13-31; claim 2 – instructions for setting a section trace format of each CPG to be sixteen bytes).

As shown in the rejection of claim 1, Oliva discloses that the Section Trace is configured to carry a unique network element and port identifiers from the first NE to the second NE (Col. 3, lines 12-15 and 47-49; claim 2 – section trace identifier value is a character string identifying the NE to which the CPG belongs, the CPG).

Oliva discloses that other system-specific information can be transferred in the Section Trace but does not explicitly disclose the Section Trace identifying a wavelength associated with the CPG or port of the NE.

Shanton discloses SONET J0 byte message monitoring in a WDM system. Shanton shows that the Section Trace (J0 byte) of a SONET frame can communicate information between NEs such as wavelength associated with a particular channel (Col. 1, lines 50-53; claim 2 – section trace identifier identifies a wavelength associated with the CPG).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the computer program product of Oliva by identifying the wavelength associated with a port of a NE in the Section Trace, as shown by Shanton, since the wavelength is a parameter of the connection which is being monitoring and enables further verification of proper connectivity between the NEs by tracing the channel that carries the data of a particular message.

5. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva in view of Bawa et al. (US006212169B1), hereafter Bawa.

- In regards to Claim 4,

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements that covers all limitations of the parent claim.

Oliva shows that the information relating to the configuration of a network element, including the configuration of the ports of the NE, may be stored in registers in the NE (Col. 4, lines 35-50; claim 4 – each CPG has an original user configuration; claim 4 - instructions for determining the original user configuration for each CPG; claim 4,5 – instructions for storing the original user configuration).

Oliva does not explicitly disclose the ability to reset the original user configuration for each CPG.

Bawa discloses parameter reconfiguration. Bawa shows that the configuration of a network element may be reset to its original values if a problem occurs in the requesting reconfiguration of the network (Col. 3, lines 35-41; claim 4 – instructions for resetting the original user configuration).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enable resetting the user configuration of a network element to the original configuration if a problem in communicating configurations between network elements occurs, as shown by Bawa. This would allow fault recovery by putting each network

element back into a known-good state and proceeding with communications from that known-good state.

- In regards to Claim 7,

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements that covers all limitations of the parent claim.

Oliva discloses that the Section Trace is configured to carry a unique network element and port identifiers from the first NE to the second NE (Col. 3, lines 12-15 and 47-49; claim 7 – instructions for receiving as input an identification of a first NE of the line).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva in view of Shanton as applied to claim 1 above, and further in view of Bawa.

- In regards to Claim 5,

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements that covers all limitations of the parent claim.

Oliva shows that the information relating to the configuration of a network element, including the configuration of the ports of the NE, may be stored in registers in the NE (Col. 4, lines 35-50; claim 5 – each CPG has an original user configuration;

claim 5 - instructions for determining the original user configuration for each CPG; claim 5 – instructions for storing the original user configuration).

Oliva does not explicitly disclose the ability to reset the original user configuration of each CPG.

Bawa discloses parameter reconfiguration. Bawa shows that the configuration of a network element may be reset to its original values if a problem occurs in the requesting reconfiguration of the network (Col. 3, lines 35-41; claim 5 – instructions for resetting the original user configuration).

It would have been obvious to one of ordinary skill in the art at the time of the invention to enable resetting the user configuration of a network element to the original configuration if a problem in communicating configurations between network elements occurs, as shown by Bawa. This would allow fault recovery by putting each network element back into a known-good state and proceeding with communications from that known-good state.

7. Claims 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva in view of Miyake et al. (US 20050025071A1), hereafter Miyake.

- In regards to Claim 9-14

Oliva discloses a network system and method for continuous monitoring of neighboring network elements and determining connection topology among network elements that covers all limitations of the parent claim.

Oliva discloses that the second NE receives and stores the first NE identifier in the section trace transmitted from the first NE and determines the connection relationship with the first NE based on the stored first NE identifier and its own NE and port identifiers (Col. 3, lines 47-54; claim 9 – instructions for receiving as input an identification of a first NE of the line; claim 9,11,13 – instructions for reading the stored section trace transmit value of each CPG which belongs to the first selected NE) (claim 9,11,13 – instructions for reading the stored section trace received value of each CPG which belongs to the first selected NE).

Referring to Fig. 11, Oliva shows that each port enables either upstream or downstream communication with another NE (claim 10,11,13 – each CPG is either an upstream or downstream CPG).

Oliva shows that separate registers are provided for storing the transmit/receive (upstream/downstream) information of each NE communicated through the section trace (claim 10,11,13 – section trace blocks are arranged so that the blocks corresponding to upstream CPGs appear on a first side and the blocks corresponding to downstream CPGs appear on a second side of the section trace information).

Oliva does not explicitly disclose displaying the various information communicated between the NEs through use of the section trace.

Miyake discloses a network management system. Referring to Figs . 9 and 16, Miyake shows that information pertaining to the configuration of a network, including the identification of individual equipment and port addresses on the network, may be

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collected and displayed to a user (claim 9,11,13 – instructions for displaying equipment information which identifies the first selected NE; claim 9,11,13 – instructions for displaying section trace information comprising at least one section trace block, each block corresponding to one CPG in the first selected NE and including the section trace transmit and received values of the CPG to which the section trace block corresponds; claim 12,14 – displaying equipment information and section trace information for the second NE alongside the equipment and section trace information for the first NE).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system and method of Oliva by enabling the display of network element and port information, as shown by Miyake, communicated and stored between network elements through the section trace. This would enable surveying the network configuration as a whole by a network manager to visually monitor the connectivity of the network and respond to any service requirements, faults, etc. that may occur.

Allowable Subject Matter

8. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 2/10/2006 have been fully considered but they are not persuasive.

- In the Remarks on pg. 2-3 of the Amendment, Applicant contends that Oliva fails to teach or disclose instructions for configuring each CPG to enable section tracing, for populating a section trace transmit value, and for reading a section trace received value of each CPG as claimed.
- The Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., process for configuring, populating and reading section tracing information as described in Fig. 4) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
- In the Remarks on pg. 3-8 of the Amendment, Applicant contends there is no motivation or suggestion to combine Oliva with Shanton, Miyake and/or Bawa, apart from hindsight analysis based on Applicant's disclosed invention, in the rejection of claims 2, 4, 5, 7, and 9-14.

- The Examiner respectfully disagrees. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Furthermore, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).
- In the case of the rejection of claim 2, Oliva discloses the monitoring of fiber connectivity, including system- and channel- specific information, between network elements in a SONET environment, but does not explicitly disclose monitoring the wavelength on which communication is carried out. However, it is well known that communication in SONET can be carried out in a wavelength division multiplexed manner, as shown in Shanton, to increase

system capacity. Therefore, it would be obvious to modify Oliva such that the section trace is utilized for monitoring the particular wavelength that carries communication in a WDM system.

- In the case of the rejection of claim 4 and 7, Oliva shows that NE configuration information is stored but does not explicitly show that configuration can be reset. However, Bawa discloses that resetting configuration settings can be useful in recovering from faults in the network. Therefore, it would be obvious to modify Oliva by enabling the reset of the stored configurations in order to recover from faults.
- In the case of the rejection of claim 5, proper motivation is shown for combining Oliva with both Shanton and Bawa, as described above. Combining all three references is equally proper as all three references are analogous as they all pertain to the configuration, monitoring and management of communication networks.
- In the case of the rejection of claim 9-14, the disclosure of Miyake is relied upon simply to illustrate the advantages of visually displaying network information communicated between NEs. Therefore, it would be obvious to modify Oliva by enabling such visual display such that a user/network administrator could better analyze the network for service requirements, faults, etc.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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